

## ALASKA REGIONAL SCIENTIFIC REVIEW GROUP

SRG members: John Citta, Beth Concepcion, Thomas Doniol-Valcroze, Mike Miller, Greg O’Corry-Crowe, Lorrie Rea, Eric Regehr, Kate Stafford, Megan Peterson Williams

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Mr. Chris Oliver  
Assistant Administrator for Fisheries  
National Marine Fisheries Service  
1315 East-West Highway  
Silver Spring, MD 20910  
transmitted by electronic mail

October 5, 2020

Dear Mr. Oliver:

The Alaska Regional Scientific Review Group (AKSRG) held its annual meeting on 27-28 February 2020 at the National Marine Fisheries Service (NMFS), Alaska Fisheries Science Center in Seattle, Washington. Our agenda included the review of the 2020 marine mammal stock assessment reports (SARs) and research and policy updates from NMFS staff on issues associated with the status and assessment of Alaska’s marine mammal stocks.

### Ice Seal Abundance

In 2016, the NMFS and partners conducted an instrument-based aerial survey of ice seals in the Chukchi Sea region. A coordinated effort was conducted in Russian portions of the Chukchi Sea. The AKSRG recognizes that quantitative estimates of abundance are important for Alaskan ice seals, given that ringed and bearded seals are considered threatened under the U.S. Endangered Species Act (ESA) and subsistence harvest levels for some species may be approaching the Potential Biological Removal (PBR). **We recommend that NMFS update the AKSRG on the status of analyses to estimate abundance for Alaskan ice seals.**

### Ice Seal Subsistence

In 2019, the AKSRG recommended that NMFS consult the work of Nelson et al. (2020) and incorporate more realistic estimates of harvest for ice seals. We are pleased that NMFS

followed this recommendation and incorporated the harvest data from Nelson et al. (2020) in their SARs for ice seals. **We recommend that NMFS investigate how to work with the Ice Seal Committee to continue collecting harvest data and to update estimates of ice seal harvest on a regular basis, targeting formal updates at least every 3-4 years.**

### **Cook Inlet Beluga Whales**

NMFS staff presented a broad summary of research on Cook Inlet Beluga whales including new findings from aerial surveys and updated abundance and trend information (Shelden *et al.* 2019; Wade *et al.* 2019). These new methods, in concert with data from the latest survey (2018), substantially changed the estimates of population abundance and trend over the past 10 years (2008-2018) compared to previous reports. Earlier assessments by NMFS demonstrated a gradual decline from 1999 to 2016 (Hobbs *et al.* 2015; Shelden *et al.* 2017), while the newer studies suggest a dramatic population recovery period from 2004-2010, followed by a period of steep decline (Wade *et al.* 2019). Subsequent to the 2020 meeting, results from a University of Washington study that included NMFS personnel were published (Jacobson *et al.* 2020). This study, which incorporated the aerial survey data, arrived at yet another very different estimate of the recent abundance and trend of Cook Inlet belugas. **The SRG requests clarification on the diverging population abundance and trend estimates in light of the most recent publications mentioned, specifically as it relates to a newly identified recovery period 2004-2010, which suggests a maximum population growth rate that may not be biologically feasible.**

Moreover, using the new abundance estimation methods, Wade *et al.* (2019) report high variation in daily and annual estimates of abundance, often involving differences of hundreds of whales between years, and even between days within years. **The SRG requests additional clarification regarding the revised aerial-based sampling methods and the potential explanation for high variation/uncertainty in daily estimates.**

### **Eastern Bering Sea Beluga Whale Status**

The Alaska Native Subsistence harvest of Eastern Bering Sea (EBS) belugas is currently exceeding the Potential Biological Removal (PBR) for this stock. Removals are likely underestimated because harvest information does not currently include struck and lost belugas. The Alaska Beluga Whale Committee (ABWC) collects harvest data for EBS belugas. The ABWC, including ABWC delegates from communities that hunt EBS belugas, are aware that harvest currently exceeds PBR, and the ABWC is exploring if there is regional support for a beluga management plan. **We recommend that NMFS closely monitor this situation and**

prioritize estimating the abundance of EBS belugas on a regular basis. We also recommend that NMFS investigate how to work with ABWC to support collection and consistent reporting of harvest information and data necessary to estimate the proportion of struck and lost belugas. We are concerned that total harvest of belugas may greatly exceed PBR once the number of struck and lost belugas are properly accounted for.

### **Electronic Monitoring**

Electronic Monitoring (EM) is expanding in most federal commercial fishery fleets in Alaska as well as nationally. In particular, partial coverage fleets operating out of the Eastern Bering Sea and Gulf of Alaska are seeing a significant proportion of coverage transitioning to EM (as opposed on-board observers). As EM programs continue to expand, and more vessels opt to use EM instead of observers, it will be increasingly difficult to track marine mammal interactions as cameras are not currently designed to monitor marine mammal interactions. This will in turn decrease the amount of data on marine mammal interactions with commercial fisheries and increase uncertainty in Mortality and Serious Injury (M&SI) estimates in several marine mammal stock assessments. **We recommend that NMFS and the Marine Mammal Lab at the Alaska Fisheries Science Center work with the observer program to develop protocols within the EM framework to ensure that marine mammal interaction data collection continues to be a component of the observer program. If marine mammal interaction data cannot be collected via EM, the AKSRG would like to be updated on how M&SI estimates are being adjusted as more vessels transition to EM.**

### **Survey Prioritization**

Data necessary for determining stock status, such as abundance estimates, for most of the large whale species assessed in the Alaska SARs are decades old. It is critical to focus survey efforts in the eastern Bering Sea (EBS) and the Gulf of Alaska, which are areas where extensive surveys have not occurred recently. Surveys are particularly important in the EBS, where extreme climate-change-driven transformations in the distribution of zooplankton, fish and, potentially, marine mammals are occurring. **We therefore recommend that NMFS prioritize the upcoming PACMAPPs and ARMAPPs marine mammal shipboard surveys in order to assist NMFS in fulfilling its mandate of calculating Potential Biological Removal for marine mammal stocks in Alaska.**

The Arctic region is also undergoing significant changes; however there has been considerable ice-based and aerial survey effort in the United States Arctic over the past 40 years. **We also**

recommend that NMFS work towards synthesizing existing acoustic-, vessel-based, and aerial-survey data from the US Arctic.

#### **Habitat Concerns Section Standardization**

There is some inconsistency among SARs as to whether climate change and other potential stressors in the habitat are described. **We recommend that the section titled Habitat Concerns be consistently used in all SARs to reflect environmental factors that are likely to pose a threat to marine mammals in Alaska. This should include a statement on how climate change and ocean acidification are expected to impact each species overall, followed by other specific potential threats such as marine heatwave events, commercial shipping activities, unusual mortality events (UMEs), harmful algal blooms, and environmental contaminants (e.g., mercury, persistent organic pollutants etc.) when information is available for that species.** This information is important to have in one section together so that the potential for multiple stressors in the habitat can be assessed.

#### **N<sub>MIN</sub> and R<sub>MAX</sub> Standardization**

The Alaska SRG commends NMFS staff and stock assessment authors for their response to the 2019 recommendations to improve the language and consistency surrounding deviations from default N<sub>MIN</sub> and R<sub>MAX</sub> used in SARs and PBR determinations. Surveys typically cannot cover the full distribution of marine mammal stocks, thus N<sub>MIN</sub> is often estimated for a portion of a stock's known range. **We recommend that stock assessment authors specify *to the extent possible* the portion of the stock's range for which the stock N<sub>MIN</sub> is estimated.** This will enable the SRG to better assess uncertainty around N<sub>MIN</sub> estimates as well as implications regarding fishery interactions.

#### **PBR and mortality for transboundary stocks**

A related issue to N<sub>MIN</sub> representing only a portion of a stock's range is that of transboundary stocks. The GAMMS specify that in such cases, mortality must be compared to PBR in a consistent way. Ideally, both U.S. and non-U.S. sources of human-caused mortality and serious injury must be compared to the PBR for the entire stock range. If estimates of mortality or abundance from outside the U.S. EEZ cannot be determined, PBR calculations should be based on abundance within the EEZ and compared to mortality within the EEZ (which, for migratory stocks, may involve apportioning the total PBR based on the fraction of time the stock spends in U.S. waters). Numerous Alaska stocks are transboundary, yet this issue is not always addressed in a clear and consistent manner. **Overall, the SARs would benefit from explicitly**

**acknowledging the transboundary nature of the stocks, and we recommend clarifying whether total mortality in a given SAR is compared to total abundance or whether PBR has been apportioned in some way.**

#### **SEAK Harbor Porpoise**

The AKSRG appreciates the significant advances made on Southeast Alaska (SEAK) harbor porpoise research in 2019 via eDNA work and the SEAK vessel-based survey. There is evidence the footprint of state gillnet fisheries is expanding, which will in turn increase the likelihood of fishery interactions with SEAK porpoise. Thus we look forward to the development of the SEAK state-water observer program to better monitor SEAK harbor porpoise interactions. We also note there remains a high degree of uncertainty regarding inshore and offshore population structure for this stock, and this may have important implications for fishery interactions and future abundance estimates. SEAK harbor porpoise remains an important conservation issue as the M&SI estimate continues to exceed the PBR, and data on fishery interactions are limited.

**We recommend that abundance estimates and stock structure data be updated and included in the 2021 SEAK harbor porpoise SAR, and we continue to support prioritizing observer funds to monitor state-water fisheries interactions with harbor porpoise.**

As a group, the AKSRG appreciates the opportunity to review marine mammal stock assessments and assist NMFS in addressing the conservation concerns of Alaska marine mammal stocks. We appreciate your consideration of the above recommendations and will gladly discuss these them in greater detail as needed.

Sincerely,

Megan J. Peterson Williams & Gregory O’Corry-Crowe, Co-Chairs  
Alaska Scientific Review Group